

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

CORRECTED VERSION

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
14 December 2000 (14.12.2000)

PCT

(10) International Publication Number  
**WO 00/75278 A3**

(51) International Patent Classification<sup>7</sup>: **A61K 38/00, C07H 21/02, 21/04, C07K 14/00, C12N 5/00, 5/06, 5/10, 15/00, 15/09, 15/11, 15/12, 15/63**

(21) International Application Number: **PCT/US00/15621**

(22) International Filing Date: **7 June 2000 (07.06.2000)**

(25) Filing Language: **English**

(26) Publication Language: **English**

(30) Priority Data:  
09/327,750 **7 June 1999 (07.06.1999) US**

(63) Related by continuation (CON) or continuation-in-part (CIP) to earlier application:

US **09/327,750 (CIP)**  
Filed on **7 June 1999 (07.06.1999)**

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(81) Designated States (national): AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:

- With international search report.
- With amended claims and statement.

(88) Date of publication of the international search report: **25 May 2001**

Date of publication of the amended claims and statement: **21 June 2001**

(48) Date of publication of this corrected version: **12 July 2001**

(15) Information about Correction:  
see PCT Gazette No. 28/2001 of 12 July 2001, Section II

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **GENE ENCODING NADE, P75<sup>NTR</sup>-ASSOCIATED CELL DEATH EXECUTOR AND USES THEREOF**

A3

(57) Abstract: This invention provides an isolated nucleic molecule encoding a polypeptide capable of binding a p75<sup>NTR</sup> receptor, and a purified version of said polypeptide capable of binding a p75<sup>NTR</sup> receptor. This invention provides a method of producing a purified polypeptide capable of binding a p75<sup>NTR</sup> receptor. This invention provides an antisense oligonucleotide having a nucleic acid sequence capable of specifically hybridizing to an mRNA molecule encoding the above described polypeptide. This invention provides a method producing a polypeptide capable of binding p75<sup>NTR</sup> receptor into a suitable vector. This invention provides a method of inducing apoptosis, a method of determining physiological effects, a method for identifying an apoptosis inducing or inhibiting compound, a method for screening cDNA libraries of said polypeptide, a method to induce caspase-2 and caspase-3 activity to cleave poly (ADP-ribose) polymerase and fragment nuclear DNA in a cell, a method to inhibit NF- $\kappa$ B activation in a cell, a method to detect a neurodegenerative disease, a method of producing the isolated human HGR74 protein into a suitable vector, a pharmaceutical composition comprising a purified polypeptide capable of binding a p75<sup>NTR</sup> receptor and a pharmaceutically acceptable carrier and a method of identifying a compound which is an apoptosis inhibitor.

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